

IN THE CLAIMS:

Please amend claims 1, 3-4 and 6-8 as follows:

1. (Currently Amended) A method of calculating the frequency of appearance of a keyword, using a first database in which information about a base sequence or an amino acid sequence is stored and a second database in which text document data is stored, said method consisting of:

a first text document data file extraction step for extracting from said first database a first text document data file ~~from said first database~~ which contains a base sequence or an amino acid sequence of a gene or protein of interest inputted by a user;

an identifier extraction step for extracting an identifier identifying text document data in said first text document data file from said extracted first text document data file ~~which contains the base sequence or the amino acid sequence~~;

a second text document data file extraction step for extracting a second text document data file from said second database which contains said extracted identifier;

an appearance frequency calculation step for sequentially reading keywords from a keyword category table ~~containing predefined~~ which contains categories and said keywords of known functions or characteristics of genes or proteins ~~from said first database~~, and for calculating a frequency of appearance of each of said keywords by automatically and mechanically counting ~~per document~~ a number of extracted second text document[[s]] data files that contain ~~containing~~ said each keyword[[s]] therein and calculating a frequency of appearance of each of said categories thereby generating a frequency calculation result table of a structure mirroring the tree structure, said frequency calculation result table containing the frequency of appearance of each of the keywords, and a frequency of appearance of each category of the lower level which is a sum of frequencies of appearance of keywords belonging to said each category of the lower level; and

a displaying step for displaying [[a]] each of said keywords side-by-side with the calculated frequency of appearance of each of said keywords, and each of said categories side-by-side with the calculated frequency of appearance of each of said categories in a keyword frequency table corresponding to positions in said keyword category table thereby showing numbers of second text document[[s]] data files including said keywords for the user to determine whether to select or change a research course of said base sequence or said amino acid sequence of a gene or

protein of interest inputted by the user,

wherein each of said keywords includes one or more words, and said keyword category table has a tree structure in which keywords are stored such that they are and classified according to into said categories organized as at least one level in said category table, said at least one level includes a lower level[[, and]]

~~wherein said appearance frequency calculation step comprises a step for generating a frequency calculation result table of a tree structure, said table containing the frequency of appearance of a keyword and the frequency of appearance of an upper level category to which the keyword belongs.~~

2. (Cancelled)

3. (Currently Amended) The keyword frequency calculating method according to claim 1, wherein said first text document data file extraction step is repeated ~~comprises a step for extracting a first document from said first database~~ for each of a plurality of sequences entered by the user.

4. (Currently Amended) A program embedded in a computer readable storage medium for causing a computer to calculate ~~carry out a keyword frequency calculation method of calculating~~ the frequency of appearance of a keyword, using a first database in which information about a base sequence or an amino acid sequence is stored and a second database in which text document data is stored, said program consisting of:

a first text document data file extraction module for extracting from said first database a first text document data file ~~from said first database~~ which contains a base sequence or an amino acid sequence of a gene or protein of interest inputted by a user;

an identifier extraction module for extracting an identifier identifying text document data in said first text document data file from said extracted first text document data file ~~which contains the base sequence or the amino acid sequence;~~

a second text document data file extraction module for extracting a second text document data file from said second database which contains said extracted identifier;

an appearance frequency calculation module for sequentially reading keywords from a keyword category table ~~containing predefined~~ which contains categories and said keywords of known functions or characteristics of genes or proteins ~~from said first database,~~ and for calculating a frequency of appearance of

each of said keywords by automatically and mechanically counting ~~per document~~ a number of extracted second text document[[s]] data files that contain ~~containing~~ said each keyword[[s]] therein and calculating a frequency of appearance of each of said categories thereby generating a frequency calculation result table of a structure mirroring the tree structure, said frequency calculation result table containing the frequency of appearance of each of the keywords, and a frequency of appearance of each category of the lower level which is a sum of frequencies of appearance of keywords belonging to said each category of the lower level; and

a module for defining each of said keywords to include one or more words and for providing said keyword category table with a tree structure in which keywords are stored such that they are and classified according to into said categories organized as at least one level in said category table, said at least one level includes a lower level; and

a displaying module for displaying [[a]] each of said keywords side-by-side with the calculated frequency of appearance of each of said keywords, and each of said categories side-by-side with the calculated frequency of appearance of each of said categories in a keyword frequency table corresponding to positions in said keyword category table thereby showing numbers of second text document[[s]] data files including said keywords for the user to determine whether to select or change a research course of said base sequence or said amino acid sequence of a gene or protein of interest inputted by the user[[,]]

~~wherein said appearance frequency calculation module generates a frequency calculation result table of a tree structure, said table containing the frequency of appearance of a keyword and the frequency of appearance of an upper level category to which the keyword belongs.~~

5. (Cancelled)

6. (Currently Amended) The program ~~embedded in a storage medium for causing a computer to carry out a keyword frequency calculation method~~ according to claim 4, wherein said first text document data file extraction module repeatedly extracts a first text document data file from said first database for each of a plurality of sequences entered by the user.

7. (Currently Amended) The keyword frequency calculating method according to claim ~~[[2]]~~1, wherein a frequency of appearance of each category of a upper-lever in the ~~keyword~~ category table is ~~[[the]]~~ a sum of frequencies of appearance of lower-level categories belonging to the upper-lever category.
8. (Currently Amended) The program ~~embedded in a storage medium for causing a computer to carry out a keyword frequency calculation method~~ according to claim ~~[[5]]~~ 4, wherein a frequency of appearance of each category of a upper-lever in the ~~keyword~~ category table is ~~[[the]]~~ a sum of frequencies of appearance of lower-level categories belonging to the upper-lever category.